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**From:** EPAResearchCompass [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C1E8F11508674C3C954553A1129D33E5-EPARESEARCH]  
**Sent:** 2/6/2018 10:05:57 PM  
**To:** ORD-ALL Feds and NonFeds and RSLs [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2c735272eef941588aefd9a05ed28823-ORD-ALL Feds and NonFeds and RSLs]  
**CC:** Lincoln, Larry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8248d03a1441414db7754db201ebec45-Lincoln, Larry]; Barnett, Felicia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5773b45cae5142fe950861dd6146f1e9-Barnett, Felicia]; Carter, Bobbi [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f16dcafe85fc418ebd1651be2e8ab82d-Carter, Bobbi]; Gettle, Jeaneanne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d8e72aa7e1894faea44006fd9f22b637-Gettle, Jeaneanne]; Taylor, Dawn [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b984d00ec06544e498ee5d986f97047c-Taylor, Dawn]; Klinger, Adam [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=346d5466632f4967adc7169c8d2ce4fd-Klinger, Adam]; Widener, Charles (Chuck) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=db4c02702e5a4d25aabff1cf8bfa3e36-Widener, Ch]; Liljegren, Jennifer [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c7098a838cd34f75b8878571fe95d939-JLiljegr]; Pollard, Solomon [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=16cdf700f8024145847a2770b84abae3-Pollard, Solomon]; Clarage, Meredith [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ee9504437be545489f518710a5e80e68-Clarage, Meredith]  
**Subject:** Weekly Compass: February 6, 2018



Weekly Update: 2/6/2018

Welcome to the Weekly Compass, your gateway to information about recent and upcoming ORD activities. If you have ideas for the Weekly Compass, please send them to the editors. To see past issues, visit the Weekly Compass archive on [ORD@work](mailto:ORD@work).

**Weekly Note from Jennifer**

ORDers - Last Friday, Richard Yamada, Chris Robbins, and I had a very successful visit to our Cincinnati facility where we met with Region 4 and 5 colleagues as well as directors of neighboring state environmental agencies. Directors and staff from Indiana, Michigan, Ohio, West Virginia, and Wisconsin shared with us their state's environmental issues, including PFAS contamination, Superfund sites, lead, harmful algal blooms, and waste remediation. Risk communication and analytical tools were also noted as important to the success of their environmental programs. Ken Wager, EPA's Senior Advisor to the Administrator for Regional and State Affairs, attended the meeting and emphasized EPA's commitment to supporting states' environmental needs. A gigantic thank you to everyone in Cincinnati who shared their work with the regions and states and made this trip the great achievement that it was!

Also last Friday, the National Academy of Sciences convened a public workshop to assess changes that have been made to the IRIS program in response to recommendations made in previous NRC reports. NCEA leadership and staff gave excellent presentations and NAS panelists seemed favorably responsive to the IRIS efforts.

This week, Richard and I will meet with Region 4 Administrator Trey Glenn, DRA Anne Heard, and Region 4 staff in Atlanta and then visit the EPA campus in Athens, Georgia. While in Athens we plan to meet with the management team, tour the lab, and hear about some of the NERL research being done there. We look forward to our all hands meeting with Athens staff on Thursday from 1 – 2 pm.

EPA is reducing costs by consolidating the facility footprint and thereby reducing lease costs. As part of this effort that started in 2011, ORD is moving out of leased space. In 2018, ORD will move all employees out of the leased space in Las Vegas, NV. The move will be completed by September 30, 2018. Staff affected by this consolidation will be given the option to relocate to one of ORD's other locations, retire, or separate from the Agency. The Agency will pay for relocation costs.

We are again facing a Continuing Resolution deadline this Thursday at midnight. We are watching events closely and will keep you apprised of any potential steps needed to prepare for a potential shutdown should there be a lapse in appropriations.

Thank you, as always, for focusing on the important work you are doing to protect the environment and public health. - *Jennifer*

## Quick Updates

- Don't forget to check out the open opportunities on Talent Hub!
- Goodbye Reservationless Plus, hello Office 365 dial-in conferencing
- February is Healthy Heart Month. Learn more about research to protect heart health.
- You can read the This Week @ EPA newsletter [here](#).
- Upcoming webinars:
  - [ACE Connections Call](#): Wednesday, February 7, 11:30-12:30 pm ET

Photos of the Week: Wear Red Day for Healthy Heart Month!

## In the Lab:

## **Improved Usability of EPA Database Supporting TSCA Implementation**

This week, EPA is making available a significantly updated version of the Web-based Ecotoxicology Knowledgebase (ECOTOX), which serves as the source of toxicity effects data currently being used to evaluate the safety of existing chemicals under the Frank R. Lautenberg Chemical Safety for the 21st Century Act. ECOTOX includes data on more than 11,000 chemicals and 12,000 species, and is available online to users all over the world. Each month, 6,000-10,000 unique users perform 150,000 to 200,000 data downloads. This database provides users with a cost-effective, non-duplicative means of locating high-quality ecological effects data to support chemical decision making across a wide range of uses. ECOTOX data are used for all ecological risk assessments supporting pesticide registrations and reregistrations, all ambient water quality criteria for chemicals published since 1985, and assessments used in emergency response. The updated version of ECOTOX is being released in beta form to gather feedback before becoming final. It includes new visualization tools and other improvements to help users better identify the most critical data from current outputs more quickly.

## **Building Statistical Capacity to Assess Waters in Virginia**

Yesterday, at a meeting organized by the Virginia Department of Environmental Quality, NHEERL's Karen Blocksom demonstrated a function she created in the R programming language to identify distinct taxa in water samples to a group of state and regional biologists. The R programming language is used for statistical analysis by many state programs using National Aquatic Resource Survey (NARS) approaches and tools to monitor and report on the condition of their waters. This technical support helps EPA better support states that might be struggling with R, which has a steep learning curve, while enabling EPA to learn about tools that states are developing that we may be able to use.

## **ORD Refreshes Current Strategic Research Action Plans**

In early January, ORD initiated efforts to "refresh" our current National Research Program Strategic Research Action Plans (StRAP). These StRAPs will outline a four-year strategy, 2019 to 2022, for delivering research and results to support EPA's mission to protect human health and the environment, fulfill the Agency's legislative mandate and advance the cross-Agency priorities identified in the draft FY 2018 to 2022 EPA strategic plan. They will build on the most recent StRAPs released in 2015, however, with increased emphasis on translational science approaches and State partner needs. This large effort will be supported by a Research Planning and Coordination Team made up of ORD National Research Program, Laboratory, Center and Office representation. More about the StRAP refresh activities can be found on the sharepoint site ORD Planning Site.

## **Moving from Contamination to Economic Revitalization in Great Lakes**

ORD researchers will join federal and state partners today and tomorrow in Chicago, at the EPA Region 5 and EPA Great Lakes National Program Office-hosted Great Lakes Area of Concern (AOC) Revitalization Summit. Great Lakes AOCs were established in response to legacy contamination of heavy metals, polychlorinated biphenyls, and dioxin, as well as to combined sewage overflows and stormwater runoff from Great Lakes Coastal communities. There are 27 remaining AOCs on the U.S. side of the Great Lakes. The goals are to restore the beneficial uses of the aquatic ecosystems that have been impaired and, in many cases, to accomplish economic revitalization. NHEERL researchers have worked with partners to apply Remediation to Restoration to Revitalization in the St. Louis River estuary and plan to take lessons learned from that work to the summit. NRMRL has five active field projects within the Great Lakes AOCs that are venues for development of alternative monitoring technologies and innovative analysis approaches to evaluate remedy effectiveness.

## **ORD Participating in Federal Interagency Workshop**

ORD is participating in the PFAS Federal Information Exchange Workshop which began yesterday, and continues today. The meeting is sponsored by the White House's Toxics & Risks Subcommittee of the National Science and Technology Council Committee on Environment, Natural Resources, and Sustainability, co-chaired by DoD, EPA, and NIH. Meeting participants will share data with the goal of improving our understanding of the science behind decision-making regarding PFAS. Approximately 40 EPA staff are expected to attend the meeting, including representatives from most of the Agency's program and regional offices. The workshop aims to establish a foundation of common knowledge, particularly on challenges and knowledge gaps surrounding this class of chemicals, and to facilitate future information-sharing across federal agencies, from high-level officials to laboratory researchers.

## **Tox21 & ToxCast Presentation for Oil Spill Response Study**

The Ocean Studies Board of the National Academies of Sciences, Engineering, and Medicine (NASEM) is overseeing a study on the Evaluation of the Use of Chemical Dispersants in Oil Spill Response. The study aims to assess the effects and efficacy of dispersants as an oil spill response tool through review and evaluation of research reports and results. NCCT scientist Richard Judson was invited to present during the committee's upcoming workshop, which will largely focus on the potential human health hazards of dispersant use. Dr. Judson will present a brief overview of the Tox21 and ToxCast efforts, an overview of EPA research on eight dispersants, some additional results since the 2010 study, and a description of how results from the screening may be used to inform human health decisions. This is an good example of how ORD science can be responsive to regional and state partners responding to environmental disasters.

## **Arkansas Department of Environmental Quality Workshop**

Tomorrow, NCEA's Susan Cormier will attend a workshop for the Arkansas Department of Environmental Quality (ADEQ). The workshop, Tools for Assessing Stream Dissolved Minerals, will highlight and present approaches and analyses available to Arkansas including choosing what and how to measure dissolved minerals, setting upper limit criterion, conducting causal and confounding assessments, and site-specific approaches to predicting background conductivity and extirpation. In addition, the workshop will present tools such as the Biological Extirpation Analysis Tool (BEAT), the Stream Conductivity Explorer, and the Causal Analysis Diagnosis and Decision Information System (CADDIS).

## **Lead Exposure Discussions**

Tomorrow, NERL's Valerie Zartarian will be meeting with several staff scientists in NCEA, OSP, OW, and OCSPP, to discuss coordination of lead exposure-dose multimedia modeling approaches being used for regulatory decisions in the Lead and Copper Rule (OW) and Lead Hazards Standard (OCSPP). Zartarian will also be meeting with the Federal Lead Strategy steering committee of the President's Task Force on Children's Environmental Health Risks and Safety Risks, in her role as EPA co-chair on Research Goal 5, to discuss the public comments received on HUD's Federal Register Notice regarding a new interagency lead strategy.

## **Region 5 States Visiting Cincinnati Labs**

On February 2<sup>nd</sup>, State Commissioners (from Region 5) met with senior management, toured the labs and heard about specific topics that include: Cyano, PFASs, drinking water (Pb and also Mn, Sr and brominated DBPs), recreational waters (including microbial source diagnosing), and understanding elevated temperature "hot" landfills. A general lab overview that includes a brief background on all the Centers was also provided. In addition, Ken Wagner, Senior Advisor to the

Administrator for Regional and State Affairs, had an additional visit on February 1<sup>st</sup> to hear similar topics and participate in the Region 5 States visit.

## **Regional Monitoring Networks (RMNs) and Stream Restoration**

Yesterday, NCEA's Britta Bierwagen and David Gibbs (ORISE Fellow) presented at the annual meeting of the natural resources committee of the United South and Eastern Tribes in Arlington, VA. They provided an overview of the RMNs and discuss using stream restoration to increase landscape resilience.

## **New Tools for Community-led Air Monitoring**

EPA has developed two new tools for the Agency's Air Sensor Toolbox that, for the first time, enable citizen scientists and others to more effectively collect and interpret air quality data in their communities using low-cost air sensors. The new tools are the *Instruction Guide: How to Evaluate Low-cost Sensors by Collocation with Federal Reference Monitors* and the *Excel-based Macro Analysis Tool for Air Sensor Data*, which allows users to compare data from low-cost monitors to the data being collected by regulatory-grade air monitors. By comparing low-cost sensors with regulatory monitors that have undergone rigorous review and approval by the EPA, citizen scientists will gain a better understanding of the reliability of the data they collect.

## **NAS Meeting on Legionella Contamination of Water Systems**

This week, NHSRC's Helen Buse is participating in the first committee meeting of the National Academy of Sciences "Management of Legionella in Water Systems." This ad hoc committee of the Academies will review and issue a report that addresses the state of the science with respect to Legionella contamination of water systems including identifying the primary sources and route of human Legionella exposure; evaluating effective strategies for controlling and preventing Legionella, reviewing policies, codes, and guidelines that affect control and prevention of legionellosis; and identifying research gaps and needs. This study was launched following an "unprecedented" outbreak of Legionnaires' disease during the Flint water crisis and EPA's determination in 2016 that its Legionella drinking water rule is a candidate for revision. EPA is sponsoring the study along with the Centers for Disease Control and Prevention, Department of Veterans Affairs, and the Alfred P. Sloan Foundation.

## **Updates from Flint Enforcement Team Meeting**

During the meeting, the City of Flint announced that the Great Lakes Water Authority (GLWA) will participate in Flint's corrosion control study. NRMRL provided input on a letter received by Region 5 from GLWA through the Technical Support Team, as requested. Flint indicated that the next draft corrosion control study plan will be sent to the Enforcement Team by the end of February. Region 5 indicated that it will ask the Technical Support Team to provide additional technical input on this corrosion control study proposal. The Enforcement Team will also review three other reports from the City of Flint, including plans for adding a chemical feed facility and pumping station and extending water pipelines. A revocable license agreement for the lead pipe rigs was sent to Flint for signature on January 26. The rigs were built by NRMRL and have been operated in Flint since April 2016. The agreement will allow Flint to use the rigs into the foreseeable future to optimize their drinking water corrosion control program, after which the rigs may be returned to EPA.

## **WIIN Act Notification to Galesburg, IL**

In January, Region 5 sent NRMRL sequential drinking water samples collected from five homes in Galesburg, IL. Samples from four of the five homes had a lead sample result above 15 parts per billion, triggering notifications under the Water Infrastructure for Improvements to the Nation (WIIN) Act. Per the WIIN Act requirements and OW's reporting SOP, Darren Lytle sent emails to the City of Galesburg, Illinois EPA, Region 5, and OW notifying them of the high lead levels and

informing them that they need to comply with the WIIN Act and share these results with residents immediately.

## **SOT Posters**

In early March, a poster session will take place on the EPA-RTP campus in advance of the Society of Toxicology's 57th Annual Meeting and ToxExpo in San Antonio, TX, March 11-15. To achieve a more consistent appearance and to maximize the size of your SOT poster, select a template by going to O:\Public\ORD PowerPoint Templates\ORD Poster Templates\44X88 (SOT Size). Because of the volume of poster printing that precedes this meeting, it is best to submit your printing requests as early as possible. Requests for final poster printing must be submitted no later than COB Tuesday, March 6. To request poster printing, go to <http://www.rtpord.epa.gov/request/> (for requesters in RTP and Chapel Hill, NC) or <https://www.ordwrs.com/> (for all others), complete your request and indicate whether it's a proof or final (and, if a final, whether it's to be printed on paper or fabric), specify the size, and attach your file. A new request with the details above and attached file is required for each poster to be printed. Turnaround times for poster printing are 24 hours for paper and 48 hours for fabric. Have questions? Contact Dan Coberly at (919)541-5158 or Keith Tarpley at (919)541-1835.

## **Perchlorate in Drinking Water**

Last week, NCEA and OSP scientists attended OW's external peer review meeting of the draft report "Proposed Approaches to Inform the Derivation of a Maximum Contaminant Level Goal for Perchlorate in Drinking Water." Paul Schlosser (NCEA) presented the biologically based dose-response modeling that has been used to inform the proposed approaches. NCEA, NHEERL, and OSP have assisted OW over the last year in the development of the draft report, interagency review discussions and preparation of peer review meeting materials.

## **Superfund**

- Last week, Diana Cutt (OSP) assisted regional Superfund staff by reviewing the Groundwater Remedial Investigation Report and the Revised Candidate Technologies Memorandum for contaminated groundwater at the Ringwood Mines/Landfill Superfund site in Ringwood Borough, NJ. The 500-acre site, located in a historic iron mining district, includes abandoned mine shafts and pits, inactive landfills and open waste dumps.
- Last week, Jonathan Essoka, Felicia Barnett and Jan Szaro (OSP) held a scoping call with Region 3 Superfund staff to discuss a proposed effort to evaluate lead-contaminated soil at C&R Battery Superfund site, a former battery recycling facility in Chesterfield County, VA. ORD's Site Characterization and Monitoring Technical Support Center will provide technical support throughout this evaluation process.
- Last week, OSP, SHC, OLEM and the Engineering Technical Support Center Director, met to kickoff a project to identify common challenges at Superfund sites across the U.S. This effort will result in a white paper that identifies innovative science and technology that can be applied to help address these challenges.

## **Harmful Algal Blooms**

Last week, Amy Shields (Region 7 RSL) met with staff from Region 7, the U.S. Army Corps of Engineers, University of Missouri, and the City of Bethany, MO, to discuss harmful algal bloom and water quality data collected as a part of an FY17 Harmful Algal Bloom RARE project. The meeting included a discussion of cyanotoxin issues in Bethany Lake and collaboration/data sharing plans for the upcoming 2018 sampling season.

## **Embassy Science Fellowship Program**

February 1 – March 18, Diana Cutt (OSP) will travel to Belize as part of the Embassy Science

Fellows Program to provide technical support in implementing proactive procedures for proper management of the country's groundwater resources. Diana will assist in activities such as conducting an assessment of drilling methods and establishing well drilling standards for boreholes. As a representative of the EPA, Diana will work in collaboration with the Department of State and the Belize Ministry of Natural Resources.

### **Grantee publication on Stem Cells**

Stem cell based therapies potentially have critical impacts on treatments of diseases such as neurodegenerative or cardiovascular disease. The field of stem cell therapies is expected to grow, but its success depends on developing reliable methods for in vivo cell tracking with non-invasive methods. Particularly noteworthy, are the unaddressed challenges of assessing the preclinical safety and efficacy of these treatments. Progression to clinical trials is often slowed by a lack of robust preclinical data that address the engraftment and what these cells ultimately differentiate into if they do engraft. Stem cells labeling with magnetic agents allows for monitoring of their bio-distribution, viability, and physiological responses. By combining in vivo optical and magnetic resonance (MR) imaging STAR researchers have recently reported advances in tracking and quantification of super-paramagnetic iron oxide (SPIO) nanoparticles-labeled stem cells. They developed biocompatible MR labeling techniques that will not compromise the integrity of the stem cells. Their results indicate that this method provides a reliable means of tracking of stem cells during pre-clinical studies.

### **Grantee Publication on Wildfires and Indoor Air**

Wildfire events can significantly increase indoor PM<sub>2.5</sub> and VOCs, based on work by grantees at Washington State University. In a detailed analysis of air exchanges between indoor and ambient air, during and outside of wildfire events, researchers examined the indoor and outdoor concentrations of fine particles, ozone, and a number of VOCs in two test homes. Generally, indoor concentrations of particles were lower than outdoors, for the homes studied, but the effect of wildfires was noticeable even in a fully closed home. PM penetration factors for these homes were 11% and 15%, with windows and doors closed. VOC levels were generally higher indoors and not associated with ambient concentrations, indicating indoor sources, although acetonitrile and benzene levels were elevated during wildfire episodes due to introduction from ambient air. Penetration factors for ozone varied between 5% and 24% for the two homes.

### **TSCA Support**

- Alternative Toxicity Testing Strategy Paper: Last week, ORD and OCSPP discussed the latest draft of the the TSCA required strategy paper that they co-authored on approaches to reduce, refine, and replace vertebrate animal testing.
- Chemical Pre-Prioritization: Scientists from NCCT, NHEERL and NERL are supporting TSCA chemical pre-prioritization activities. The next meeting with OSCPP to discuss chemical pre-prioritization is scheduled for tomorrow.
- Chemical Exposure: ORD senior management met with OPPT management last week to discuss next steps for improving estimates of chemical exposure used in TSCA existing and new chemical assessments. Staff collaborations are largely on hold until OPPT staff complete the problem formulation documents associated with the first 10 TSCA chemicals, which are estimated to be completed by the end of February.

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## **In the Community:**

### **Career Discovery Day at East Central University, Ada, OK**

Last week, NRMRL's Jim Weaver presented information about careers in science and research to several groups of 8<sup>th</sup> grade students as part of the 8<sup>th</sup> Annual Career Discovery Day at ECU. All schools in Pontotoc County, OK, will participate in this event, which includes hundreds of students.

## **EPA-RTP STEM Outreach Program**

- Yesterday: scientists from EPA-RTP's Community Engagement and STEM Education Program will judge student projects at the North Carolina Science and Engineering Fair for Region 3B at the North Carolina School of Science and Mathematics in Durham.
- Today: hosting approximately 35 students from the Southern School of Energy and Sustainability in Durham for the program's STEMtastic Job Shadow Day at EPA-RTP; partnering with the Duke Energy Initiative at Duke University in Durham to play *GENERATE: The Game of Energy Choices* with high school students from Durham Public Schools and Duke students.
- Tomorrow: EPA scientists will play *GENERATE* with 10<sup>th</sup> grade students from the Junior Leadership Durham (JLD) program in Durham; will present hands-on STEM activities for students at W.G. Pearson Elementary School in Durham.
- Thursday: 15 EPA mentors and students participating in the EPA-Hillside High School Mentoring Program will engage in mentoring activities; the Program will speak about EPA cookstove research at the Cary Women's Club.
- Friday: EPA employees will present a session on EPA careers at West Millbrook Middle School's Career Fair in Raleigh, present a session on EPA careers at Middle Creek High School's Career and College Expo in Apex, and participating in Durant Road Middle School's Engineering Day in Raleigh.
- Saturday: EPA representatives will participate in the North Carolina Science and Engineering Fair for Region 3A at Hillside High School in Durham. Dr. Pai Yei Whung will be the keynote speaker for the event, and EPA will provide judges and host a booth.

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## **Photos of the Week: Wear Red Day for Healthy Heart Month!**

February is American Heart Month and EPA is raising awareness of heart disease and its link to air pollution and sharing heart health research. Last Friday was Wear Red Day and ORD got in on the spirit. See below for photos of your colleagues wearing red for heart health. @EPAresearch tweeted several of these as well. Thank you to everyone who participated!





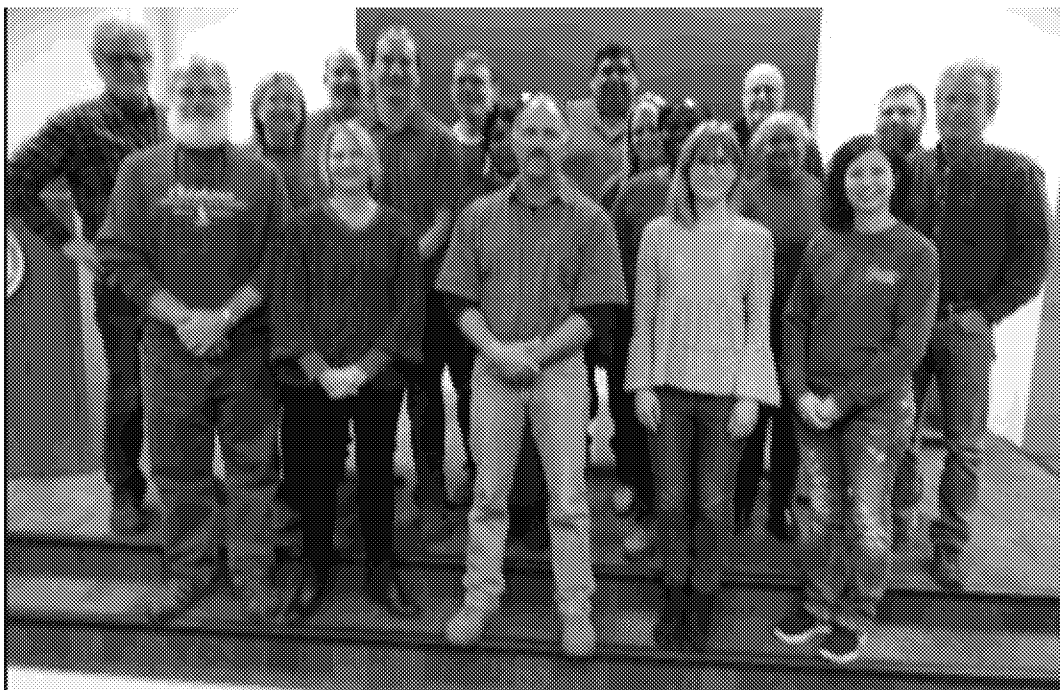
*Newport, OR*



*A collage of ORD employees from around the country that was shared via ORD's Twitter account*



*Corvallis, OR*



*Ada, OK*



*ORD colleagues spelling out EPA: "E" was taken in RTP, "P" in DC, and "A" in Cincinnati*